

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number
WO 2005/041320 A1

(51) International Patent Classification⁷: **H01L 51/30**

(21) International Application Number:
PCT/JP2004/015564

(22) International Filing Date: 14 October 2004 (14.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-364219 24 October 2003 (24.10.2003) JP

(71) Applicants (for all designated States except US): NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY [JP/JP]; 3-1, Kasumigaseki 1-chome, Chiyoda-ku, Tokyo 1008921 (JP). DAINICHISEIKA COLOR & CHEMICALS MFG. CO., LTD. [JP/JP]; 7-6, Nihonbashi-Bakurocho 1-chome, Chuo-ku, Tokyo 1038383 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MOCHIZUKI, Hiroyuki [JP/JP]; c/o National Institute of Advanced Industrial Science and Technology, Kansai, 8-31, Midorigaoka 1-chome, Ikeda-shi, Osaka 5638577 (JP). MIZOKURO, Toshiko [JP/JP]; c/o National Institute of Advanced Industrial Science and Technology, Kansai, 8-31, Midorigaoka 1-chome, Ikeda-shi, Osaka 5638577 (JP). TANIGAKI, Nobutaka [JP/JP]; c/o National Institute of Advanced Industrial Science and Technology, Kansai, 8-31, Midorigaoka 1-chome, Ikeda-shi, Osaka 5638577 (JP). HIRAGA, Takashi [JP/JP]; c/o National Institute of Advanced Industrial Science and Technology, Kansai, 8-31, Midorigaoka 1-chome, Ikeda-shi,

Osaka 5638577 (JP). TANAKA, Norio [JP/JP]; c/o Dainichiseika Color & Chemicals MFG. Co., Ltd., 7-6, Nihonbashi-Bakurocho 1-chome, Chuo-ku, Tokyo 1038383 (JP).

(74) Agents: YOSHIDA, Kenji et al.; 34-12, Kichijoji-honcho 1-chome, Musashino-shi, Tokyo 1800004 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

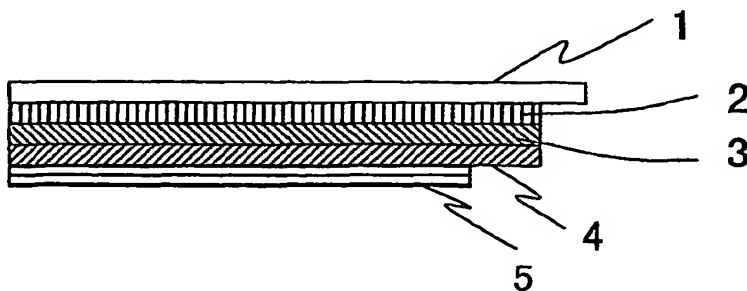
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ORGANIC ELECTROLUMINESCENT ELEMENT AND MANUFACTURING METHOD THEREOF



(57) Abstract: An organic electroluminescent element, which has a positive electrode 2 and a glass substrate 1 sequentially laminated on one side of a light-emitting layer 4 and a negative electrode 5 formed on the other side of the light-emitting layer 4, has a functional layer which is formed by causing gas molecules of at least one type of compound selected from the group consisting of dyes and charge transport materials to contact and penetrate a π conjugated organic polymer compound.